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The following document was provided by Dr. Barry Wallerstein, Regional Targets Advisory Committee (RTAC) member, for consideration by the committee.

DRAFT SB 375 RTAC Proposal

RTAC Scope of Responsibility:

California state law (SB 375, Statutes of 2008) requires the California Air Resources Board (CARB) to set regional targets for the purpose of reducing greenhouse gas emissions from passenger vehicles, for 2020 and 2035. If regions develop integrated land use, housing, and transportation plans that meet the SB 375 targets, new projects can be relieved of certain review requirements of the California Environmental Quality Act. The Board must appoint a Regional Targets Advisory Committee (RTAC) to provide recommendations on factors to be considered and methodologies to be used in the target setting process. The Committee may consider the following, and any other relevant issues:

- Data needs
- Modeling techniques
- Growth forecasts
- Jobs-housing balance
- Interregional trips
- Economic trends
- Demographic trends
- Benefits of land use and transportation strategies
- Methods to describe regional targets
- Methods to monitor performance in meeting targets

The following proposal has been prepared for consideration by California's Regional Targets Advisory Committee (RTAC) for SB 375. The proposal is presented in two parts: (1) Observations/Findings, and (2) Recommendations.

Observations/Findings:

- SB 375 requires that CARB establish an emission reduction target for CO₂ emissions from passenger cars and light-duty trucks operating within 18 Metropolitan Planning Organizations (MPOs) within the State of California.

- There is overlap between CARB's tailpipe emissions standards (Pavely I and II) and low-carbon fuel standard, and actions to be implemented by local government under SB 375. CARB staff has stated that credit will be taken for CARB regulations first and then local government actions second. Analogous procedures are routinely used in preparation of Air Quality Management Plans (AQMPs) when multiple pollution control measures affect a given source category. However, the order of implementation in this case will decrease the cost-effectiveness of measures undertaken by local government, since each trip reduced will produce less emissions reduction because the vehicle and fuels will have lower associated CO₂ emissions.
- The 18 MPOs impacted by SB 375 will need to prepare either a Sustainable Community Strategy (SCS) and/or an Alternative Planning Strategy (APS).
- There is wide variation in the character and nature of the 18 MPOs impacted by SB 375: they include the largest urban areas (e.g., Los Angeles, San Francisco, San Diego and Sacramento) within the State of California, as well as rural communities (e.g., Lake Tahoe, parts of San Joaquin Valley). The transportation systems within these areas also vary considerably, including access or ability for mass transit and other methods of trip or vehicle miles reduction.
- Transportation/land-use modeling capabilities of the various MPOs vary greatly, especially as pertains to an ability to analyze various GHG reduction strategies/policies. Some rural MPOs lack their own detailed regional transportation models. See Figure 1. Smaller MPOs therefore need to have an alternative path and process for establishing and measuring reductions, especially in the early years of implementation.
- Existing MPO transportation/land-use models were not designed with GHG estimation in mind and will need to be improved over time for SB 375 purposes.
- MPOs use different assumptions for key parameters within their transportation/land-use models even for factors that should be relatively

consistent throughout the State (i.e., fuel cost, demand response relationships for similar urban settings, etc.).

- CALTRANS and CARB both have models that are currently used to estimate vehicle miles traveled and motor vehicle non-GHG emissions within the state (i.e., DTIM & Burden). Like other models, DTIM & Burden have their own limitations.
- A variety of models and other calculation methods exist for setting the Baseline (existing) CO₂ emissions from passenger cars and light-duty trucks, and each has its pros and cons. Similarly, multiple options exist for estimating future CO₂ emissions from passenger cars and light-duty trucks.
- Current regional AQMPs and the State Implementation Plan (SIP) to achieve federal ozone and particulate clean air standards incorporate passenger car and light-duty truck data such as vehicle miles traveled, age distribution of the vehicles, number of vehicles, among others to help estimate traditional air pollutants.
- Transportation programs are underfunded during the current federal and state economic crisis and funding assistance will be needed to improve methods of CO₂ estimation for passenger cars and light-duty trucks and to implement SCS and APS policies at the local level.
- There are multiple options (metrics) available for expressing the regional targets under SB 375 (e.g., gross tons/day, percent reduction tons/day, tons per VMT, tons per capita, tons per household, etc.).
- Data gaps exist related to vehicle travel and the effects of various transportation and land-use strategies contemplated by SB 375.
- Differences in MPO models and modeling capabilities need to be addressed by CARB to ensure equity among MPOs in establishing, verifying and achieving their respective targets. This includes the establishment of acceptable standards for data quality and modeling tools or other compliance techniques.

- SCS and APS development and implementation will need to be closely coordinated with Regional Transportation Plans (RTPs), AQMPs, and local government General Plans including the affordable housing element. All of these plans undergo periodic updates.
- SB 375 implementation should inform future revisions/updates to CARB's AB 32 Scoping Plan regarding feasible CO2 reduction targets from local government policies/actions.

Recommendations:

Design Objectives

- Targets should be aggressive, yet achievable for all 18 MPOs and be readily convertible to CO2 emissions if a surrogate is used.
- CARB should establish overall statewide goal supported by individual MPO targets.
- Targets should be relative (i.e., percent reduction) instead of absolute values since CARB is taking credit first for competing GHG reduction strategies.
- The targets should be MPO-specific or grouped into categories to reflect the variation in land character and existing transportation infrastructure only to the degree needed.
- Targets should not penalize MPOs which have implemented early actions to control GHGs.
- SCS or APS aim to reduce trips or VMT; therefore, the compliance verification tools should be capable and sensitive enough to capture these changes at MPO level.
- The data/tools for establishing the target and compliance verification, at least in the near term, should not solely rely on modeling techniques in order to address MPOs' current modeling capabilities, resource limitations, and model readiness. The main goal, however, should be to have a consistent modeling process at the earliest date possible.

- There should be standardized approaches/assumptions regarding key model inputs, such as fuel cost projections, VMT response to fuel cost, etc....
- Assumptions regarding available funding for SCS strategy implementation should be realistic.

Methods for Establishing Targets and Monitoring Progress – A Dual Path Proposal When Each MPO Selects a Path

Path 1: Performance Standards Confirmed by Regional Modeling

- % reduction CO2 targets established for each MPO.
- % reduction targets should vary for urban vs. rural MPOs (more than two categories of targets should be established only to the degree needed [i.e., to accommodate significant differences in projected regional growth rate]).
- % reduction targets based on a uniform historical base year which is the same for all MPOs (earlier year selection has the benefit of not penalizing early efforts).
- CARB establishes transportation/land-use model performance standards for the purpose of qualifying MPO models for Path 1 target achievement. Statistical ranges of acceptability for selected parameters will be specified based on state and federal requirements, as well as the scientific literature.
- MPO submits its model and modeling protocol, including model performance and proposed modeling scenarios, for SCS/APS, to CARB for initial review and approval. It is anticipated that CARB will seek expert technical assistance to expedite and enhance the review process (e.g., University of California experts in transportation/land-use modeling or others) and will examine only the most significant aspects of the model and the proposed scenarios as related to SB 375.
- MPOs utilize uniform key data assumptions as model input, as specified by CARB. Assumptions are determined through a peer review process and with public comment. Outside experts should assist in making recommendations concerning key assumptions.

- MPO runs SCS or APS scenarios including sensitivity analysis for base year and 2020 and 2035; determines % CO₂ reduction for each scenario, documents results, and submits to CARB.
- CARB determines acceptability of modeling analysis based on results submitted from sensitivity analysis and judged according to acceptability criteria. CARB determines whether SCS or APS meets target.
- Equivalent substitution (e.g., enhanced energy efficiency not otherwise required by AB 32 Scoping Plan) allowed to encourage region-specific solutions if these can be verified and enforced.

Path 2: Best Management Practices (point system)

- % reduction CO₂ targets established for each MPO consistent with Path 1.
- CARB develops a list of Best Management Practices (i.e., menu) for transportation/land-use strategies to be implemented by General Plan and/or ordinance or other enforceable means. The strategies are categorized according to their emission reduction effectiveness and assigned points with the most effective category of measures receiving the highest per measure point assignment.
- CARB should set up a panel of experts to establish which policies are Best Management Practices, the implementation process (ordinance, tracking and enforcement) for each policy and estimated range of percent CO₂ reduction.
- CARB determines a point total requirement which is expected to achieve the % CO₂ reduction targets assigned to each MPO.
- MPOs select strategies from the Best Management Practices list until the point total requirement is met and includes those strategies in its SCS or APS. The MPO also outlines how it will implement, track and enforce implementation of the Best Management Practices selected by the MPO, local air district and/or cities and counties.

- MPOs may substitute strategies not included on the Best Management Practices list if approved by CARB and based on adequate documentation of equivalency. CARB will develop the criteria for such determination.
- CARB approves or disapproves the SCS or APS based on (1) whether the strategies provide adequate levels of CO₂ emission control to meet 2020 and 2035 targets and (2) whether there is a robust enough process to implement, track and enforce implementation of the strategies.
- Development strategies to focus on
 - increase development density in communities where increased density might reasonably be expected to result in reductions in VMT
 - reduce non-work related trips/VMTs
 - increase J/H balance
 - transportation pricing
 - increase transit services
- Path 2 availability sunsets at the end of the first MTP cycle completed after ARB publishes reduction targets or 2014, whichever is earlier.

Performance Evaluation

- CARB to perform statewide GHG reduction estimates based on the compliance path selected by each MPO in conjunction with transportation budget updates.
- CARB to develop a technical tool consistent with the tracking tools used for AB32 Scoping Plan and SIP implementation.
- CARB to periodically update compliance options and performance targets.

Future Transportation/Land-Use Modeling for SB 375

- Use of uniformly applied transportation/land-use modeling information to demonstrate compliance with CO₂ emission reduction targets will greatly benefit SB 375 implementation. This uniform process needs to be completed and applied at the earliest possible date. Such a process would provide

significant co-benefits in establishing reductions in the State Implementation Plan and in developing and supporting the Metropolitan Transportation Plan (MTP).

- State and federal funding assistance will be necessary to develop such a model. Obtaining such assistance should be a primary goal of regional, state and federal legislative advocacy programs.

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